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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/589,868

10/19/2006

Theodoor Slaghek

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EXAMINER

CALANDRA, ANTHONY J

ART UNIT

PAPER NUMBER

1791

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/589,868	<b>Applicant(s)</b> SLAGHEK ET AL.	
	<b>Examiner</b> ANTHONY J. CALANDRA	<b>Art Unit</b> 1791	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period **will** apply and **will** expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply **will**, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 18 August 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☒ Claim(s) 8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____.                                     |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/19/2006 and 8/18/2006</u> .                                | 6) <input type="checkbox"/> Other: _____.                         |

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***Detailed Office Action***

1. The communication dated 8/18/2006 has been entered and fully considered.
2. Claims 1-14 are pending.

***Claim Objections***

3. Claim 8 is objected to because of the following informalities: Misspelling of cellulose.

Appropriate correction is required.

***Double Patenting***

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 10-14 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 12, 13, 15-17 of copending Application No. 10/589,869. Although the conflicting claims are not identical, they are not patentably distinct from each other because both disclose keratin containing pulp and paper products. While the copending application does not state how much keratin containing material is inside the paper

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and pulp products, it would have been obvious to optimize the amount of additive added to the paper material.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Claim Rejections - 35 USC § 101***

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9. Claims 1-7 provide for the use of hydrolyzed keratin containing material, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claims 1-7 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for

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example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

***Claim Rejections - 35 USC § 102***

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1 and 8-9 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent # 6,120,644 SCHROEDER et al., hereinafter SCHROEDER.

As for claim 1, SCHROEDER discloses the use of a cationic amidoamine used in the wet end of the tissue a tissue paper machine [abstract]. SCHROEDER discloses one such amidoamine as a hydrolyzed keratin containing material [column 5 lines 15-42].

As for claim 8, SCHROEDER discloses the process of adding a cationic amidoamine to the wet end of the tissue a tissue paper machine [abstract]. SCHROEDER discloses one such amidoamine as a hydrolyzed keratin containing material [column 5 lines 15-42]. The paper making fibers are necessarily either virgin or recycled fibers. SCHROEDER specifically discloses softwood kraft pulp which can be either recycled or virgin fiber [column 13 lines 13-15].

As for claim 9, SCHROEDER discloses the process of adding a cationic amidoamine to the wet end of the tissue a tissue paper machine [abstract]. SCHROEDER discloses one such amidoamine as a hydrolyzed keratin containing material [column 5 lines 15-42]. The paper

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making fibers are necessarily either virgin or recycled fibers. SCHROEDER further discloses forming (dewatering on the formation zone), wet pressing and drying [column 1 lines 32-40 and column 13 lines 8-13].

12. Claims 10-14 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over U.S. Patent # 6,120,644 SCHROEDER et al., hereinafter SCHROEDER.

As for claim 10, SCHROEDER meets the process limitations of instant claim 8 above and therefore it is the examiners position that the paper pulp product would also meet the limitations of the instant claimed product or be an obvious variant thereof.

As for claim 11 and 12, SCHROEDER meets the process limitations of instant claim 8 and 10 above and therefore it is the examiners position that the paper pulp product would also meet the limitations of the instant claimed product or be an obvious variant thereof.

SCHROEDER discloses that the keratin containing material can be present in the amount of 0.01 to 10% [claim 1] by weight which overlaps with the instant claimed ranges with sufficient specificity.

As for claims 13 and 14, SCHROEDER meets the process limitations of instant claim 9 above and therefore it is the examiners position that the paper pulp product would also meet the limitations of the instant claimed product or be an obvious variant thereof. SCHROEDER discloses that the keratin containing material can be present in the amount of 0.01 to 10% by weight [claim 1] which overlaps with the instant claimed ranges with sufficient specificity.

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***Claim Rejections - 35 USC § 103***

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 2-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent # 6,120,644 SCHROEDER et al., hereinafter SCHROEDER in view of WIPO 03/006531 SCHROOYEN et al., hereinafter SCHROOYEN.

As for claim 2-7, SCHROEDER discloses a final composition containing hydrolyzed keratin. SCHROEDER does not disclose how to obtain the hydrolyzed keratin to form the pulp and paper additive used within.

SCHROOYEN discloses that keratin protein hydrolysate can be made from hair or feathers [pg. 4 lines 25-28]. SCHROOYEN further discloses using chicken feathers which are livestock [pg. 4 lines 29-35]. At the time of the invention it would have been *prima facie* obvious to produce the hydrolyzed keratin needed for the composition process of SCHROEDER with the chicken feathers or hair disclosed by SCHROOYEN. A person of ordinary skill in the art would be motivated to use a natural source of keratin as the use of waste keratin such as feathers is an economically viable method [pg. 4 lines 4-7]

SCHROOYEN does not disclose pig hair but at the time of the invention it would have been obvious to try the hair of a pig absent evidence of unexpected results. There are a limited number of hair producing mammals that are farmed on a large scale to supply enough keratin containing material to process. It is *prima facie* obvious to try an element from a finite and

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limited number of predictable solutions. A person of ordinary skill in the art would expect any keratin containing mammalian hair to work.

15. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. 5,707,491 HUGHES et al. in view of WIPO 03/006531 SCHROOYEN et al., hereinafter SCHROOYEN.

As for claim 1, 8 and 9, HUGHES et al. discloses the use of a hydrolyzed collagen material in papermaking to strengthen the paper sheet [abstract]. HUGHES discloses that the collagen is solubilized and added into the paper making slurry which the examiner has interpreted as the wet end [abstract]. HUGHES states that the collagen is from soft animal tissues [column 4 lines 38-55]. HUGHES mixes the solubilized collagen with the paper pulp and then dewater and dries the pulp. HUGHES uses the material as a binder [column 1 lines 10-20]. HUGHES discloses that paper is formed by using virgin fiber, adding in the solubilized collagen then forming the pulp slurry (which the examiner has interpreted contains the common step of pressing) and drying the sheet [column 7 lines 1-25].

HUGHES does not disclose the use of keratin proteins for the use of a strengthening binder agent. SCHROOYEN discloses that the keratins produced were found to be used as binders, antioxidants and antimicrobial agents [pg. 16 lines 15-30]. At the time of the invention it would have been *prima facie* obvious to substitute the natural collagen protein binder of HUGES for the natural keratin protein of SCHROOYEN. It is *prima facie* obvious to substitute one known component for another known component with the expectation of predictable results. At the time of the invention a person of ordinary skill would expect that the natural protein collagen binder could be successfully substituted for a natural protein keratin binder. A person



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of ordinary skill in the art would be further motivated to do use the keratin agent for its antioxidant and antibacterial properties. Antibacterial properties are important for preventing the formation of slime on a paper machine. Further, SCHROOYEN discloses that the keratin material can be uses as a binder [pg. 17 lines 1-10].

As for claim 2-7, SCHROOYEN discloses that keratin protein hydrolysate can be made from hair or feathers [pg. 4 lines 25-28]. SCHROOYEN further discloses using chicken feathers which are livestock [pg. 4 lines 29-35]. SCHROOYEN does not disclose pig hair but at the time of the invention it would have been obvious to try the hair of a pig absence evidence of unexpected results. There are a limited number of hair producing mammals that are farmed on a large scale to supply enough keratin containing material to process. It is *prima facie* obvious to try an element from a finite and limited number of predictable solutions. A person of ordinary skill in the art would expect any keratin containing mammalian hair to work.

As for claims 10-14, HUGHES discloses adding 0.1 to 2% of soluble collagen which overlaps with the instant claimed ranges. The paper product formed by HUGHES with the substituted keratin of SCHROOYEN would be substantially similar to the instant claimed products.

### ***Conclusion***

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANTHONY J. CALANDRA whose telephone number is (571) 270-5124. The examiner can normally be reached on Monday through Thursday, 7:30 AM-5:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AJC

/Eric Hug/  
Primary Examiner, Art Unit 1791